

**RECEIVED**

MAR 20 2013

**SUPERFUND DIVISION**

***Ambient Air Monitoring Report***

***National Industries, Inc. Reclamation Area Site  
Park Hills, Missouri***

***The Doe Run Company***

***Fourth Quarter 2012***



1001 Diamond Ridge Suite 1100  
Jefferson City, MO 65109  
Phone: (573) 638-5000  
Fax: (573) 638-5001

07WH

40417196

4.2



Superfund

04000

March 18, 2013

Mr. Mark Nations  
The Doe Run Company  
P.O. Box 1633  
Desloge, Missouri 63601

**Re: Ambient Air Monitoring Report – National Site**

Dear Mr. Nations:

Please find attached the Fourth Quarter 2012 “*Ambient Air Monitoring Report*” for The Doe Run Company at the National Industries, Inc. Reclamation Area Sites, located near Park Hills, Missouri.

This report will include the following:

- **Glossary of Terms** – Listing of the abbreviations used for each parameter and unit.
- **National Ambient Air Quality Standards** – Lists the maximum allowable concentrations for the measured parameters.
- **Quarterly Missing Data Summary** – Listing of missing particulate run days.
- **Quarterly Data Summary** – Includes the averages of each monitored parameter, which relates to the federal standard.

Barr Engineering Company offers this report as an independent laboratory. This includes the weighing of filters, obtaining lead and cadmium analysis, compiling the data, and preparing the report. No interpretation of the data or analysis of the results is implied or intended. Should you have any questions regarding this report, please call.

Respectfully,



Richard J. Campbell, PE  
Chemical Engineer  
Senior Environmental Consultant

c: Ms. Kathy Rangen  
Mr. Jason Gunter  
Mr. Ty Morris  
Mr. Kevin Lombardozzi

## GLOSSARY OF TERMS

$\mu\text{g}/\text{m}^3$	Micrograms per Cubic Meter
TSP	Total Suspended Particulate
$\text{PM}_{10}$	Particulate Matter - 10 Microns or Less
mmHg	Millimeters of Mercury

## NATIONAL AMBIENT AIR QUALITY STANDARDS (NAAQS)

$\text{PM}_{10}$ – Particulate Matter	24-Hour*	Annual Maximum	$150 \mu\text{g}/\text{m}^3$
Lead	Calendar Quarter	Arithmetic Mean	$1.5 \mu\text{g}/\text{m}^3$

TSP (Total Suspended Particulate) – There are no Federal Standards that apply solely for TSP.

\*This standard must be exceeded more than once a year to constitute a violation.

## QUARTERLY MISSING DATA SUMMARY

### TSP/Lead Summary

Big River #4 – 11/2/2012 – INVALID – Filter compromised by moisture during storm event

All Sites – 11/21 - 11/23/2012 – Holiday – No samples scheduled

National Site #3 Water Plant – 11/27/2012 – Blank Filter QA

National Site #1 – 12/6/2012 – The TSP result is qualified because the reweigh value is outside the laboratory limit gravimetric tolerance of +/- 0.001 g

National Site #2 – 12/20/2012 – INVALID - Elapsed time exceeds tolerance of  $24 \pm 1$  hours

National Site #3 Water Plant – 12/20/2012 – INVALID – Mechanical Failure

All Sites – 12/24 - 12/25/2012 – Holiday – No samples scheduled

Big River #4 – 12/28/2012 – Blank Filter QA

### $\text{PM}_{10}$ Summary

Big River #4 - 10/9/2012 – INVALID – Elapsed time indicator failed

Big River #4 QA – 11/5/2012 – INVALID – Elapsed time exceeds tolerance of  $24 \pm 1$  hours

All Sites – 11/23/2012 – Holiday – No samples scheduled

National Site #3 Water Plant – 11/27/2012 – Blank Filter QA

All Sites – 12/26/2012 – Holiday – No samples scheduled

Big River #4 – 12/28/2012 – Blank Filter QA

*Particulate and Lead Quarterly Summary*



## TSP and Lead Concentration Summary

National  
Park Hills, Missouri

2012

Date	TSP Big River #4 ( $\mu\text{g}/\text{m}^3$ )	TSP Ozark #1 ( $\mu\text{g}/\text{m}^3$ )	TSP Soccer #2 ( $\mu\text{g}/\text{m}^3$ )	TSP Water Plant #3 ( $\mu\text{g}/\text{m}^3$ )	LEAD Big River #4 ( $\mu\text{g}/\text{m}^3$ )	LEAD Ozark #1 ( $\mu\text{g}/\text{m}^3$ )	LEAD Soccer #2 ( $\mu\text{g}/\text{m}^3$ )	LEAD Water Plant #3 ( $\mu\text{g}/\text{m}^3$ )
10/1/12	31	32	35	23	0.016	0.011	0.014	0.017
10/2/12	31	29	28	22	0.032	0.015	0.020	0.010
10/3/12	33	36	37	31	0.008	0.014	0.017	0.008
10/4/12	41	30	39	36	0.027	0.016	0.024	0.015
10/5/12	17	12	25	12	0.000	0.000	0.006	0.000
10/8/12	22	13	13	8	0.039	0.011	0.014	0.000
10/9/12	13	13	18	12	0.000	0.000	0.008	0.000
10/10/12	17	19	14	10	0.014	0.006	0.012	0.009
10/11/12	27	27	25	19	0.012	0.009	0.016	0.000
10/12/12	23	21	23	20	0.000	0.000	0.012	0.000
10/15/12	27	19	21	21	0.030	0.007	0.014	0.023
10/16/12	17	29	30	18	0.007	0.029	0.085	0.000
10/17/12	51	38	30	48	0.007	0.009	0.019	0.011
10/18/12	34	46	40	41	0.000	0.000	0.013	0.008
10/19/12	13	12	10	12	0.010	0.000	0.000	0.034
10/22/12	29	36	46	30	0.008	0.022	0.052	0.000
10/23/12	24	28	40	26	0.000	0.000	0.029	0.000
10/24/12	28	31	39	27	0.007	0.007	0.024	0.000
10/25/12	13	14	14	17	0.000	0.000	0.006	0.025
10/26/12	12	11	40	11	0.000	0.000	0.012	0.000
10/29/12	28	39	23	22	0.018	0.010	0.006	0.019
10/30/12	36	30	25	37	0.029	0.019	0.007	0.083
10/31/12	37	26	23	21	0.033	0.015	0.017	0.039
Monthly Average	26	26	28	23	0.013	0.009	0.018	0.013

QUARTERLY LEAD NAAQS LIMIT: 1.5  $\mu\text{g}/\text{m}^3$

Please see the particulate analysis sheets for explanations of missing or invalid data.

Note: A summary of the Big River #4 sampler data is also included, because it was part of the QA plan.



## TSP and Lead Concentration Summary

National  
Park Hills, Missouri

2012

Date	TSP Big River #4 ( $\mu\text{g}/\text{m}^3$ )	TSP Ozark #1 ( $\mu\text{g}/\text{m}^3$ )	TSP Soccer #2 ( $\mu\text{g}/\text{m}^3$ )	TSP Water Plant #3 ( $\mu\text{g}/\text{m}^3$ )	LEAD Big River #4 ( $\mu\text{g}/\text{m}^3$ )	LEAD Ozark #1 ( $\mu\text{g}/\text{m}^3$ )	LEAD Soccer #2 ( $\mu\text{g}/\text{m}^3$ )	LEAD Water Plant #3 ( $\mu\text{g}/\text{m}^3$ )
11/1/12	54	42	43	37	0.044	0.023	0.026	0.036
11/2/12	INVALID	36	32	31	INVALID	0.008	0.010	0.006
11/5/12	24	16	15	15	0.000	0.011	0.013	0.000
11/6/12	8	11	9	9	0.013	0.014	0.012	0.021
11/7/12	19	18	15	9	0.021	0.018	0.017	0.006
11/8/12	16	35	26	16	0.000	0.027	0.024	0.000
11/9/12	19	48	58	21	0.000	0.070	0.078	0.000
11/12/12	11	18	16	11	0.007	0.009	0.014	0.011
11/13/12	55	19	26	14	0.018	0.009	0.025	0.009
11/14/12	27	20	23	12	0.021	0.009	0.020	0.000
11/15/12	35	26	29	18	0.029	0.016	0.024	0.018
11/16/12	31	31	42	30	0.015	0.013	0.023	0.011
11/19/12	22	28	57	19	0.022	0.019	0.055	0.028
11/20/12	88	56	49	37	0.138	0.018	0.033	0.046
11/26/12	41	30	32	27	0.021	0.009	0.008	0.008
11/27/12	43	44	46	23	0.060	0.035	0.054	0.018
11/28/12	47	38	38	24	0.044	0.029	0.051	0.017
11/29/12	19	26	32	15	0.010	0.025	0.039	0.000
11/30/12	23	34	52	24	0.000	0.016	0.040	0.006
Monthly Average	32	30	34	21	0.026	0.020	0.030	0.013

QUARTERLY LEAD NAAQS LIMIT: 1.5  $\mu\text{g}/\text{m}^3$

Please see the particulate analysis sheets for explanations of missing or invalid data.

Note: A summary of the Big River #4 sampler data is also included, because it was part of the QA plan.



## TSP and Lead Concentration Summary

National  
Park Hills, Missouri

2012

Date	TSP Big River #4 ( $\mu\text{g}/\text{m}^3$ )	TSP Ozark #1 ( $\mu\text{g}/\text{m}^3$ )	TSP Soccer #2 ( $\mu\text{g}/\text{m}^3$ )	TSP Water Plant #3 ( $\mu\text{g}/\text{m}^3$ )	LEAD Big River #4 ( $\mu\text{g}/\text{m}^3$ )	LEAD Ozark #1 ( $\mu\text{g}/\text{m}^3$ )	LEAD Soccer #2 ( $\mu\text{g}/\text{m}^3$ )	LEAD Water Plant #3 ( $\mu\text{g}/\text{m}^3$ )
12/3/12	14	22	31	17	0.012	0.023	0.048	0.021
12/4/12	13	19	31	11	0.012	0.014	0.029	0.013
12/5/12	40	20	31	17	0.021	0.008	0.035	0.012
12/6/12	18	17	30	12	0.011	0.010	0.037	0.009
12/7/12	30	30	30	22	0.034	0.035	0.040	0.036
12/10/12	38	18	13	10	0.049	0.011	0.011	0.009
12/11/12	17	24	26	15	0.009	0.017	0.032	0.008
12/12/12	26	37	31	21	0.018	0.024	0.048	0.021
12/13/12	33	29	24	15	0.049	0.023	0.048	0.028
12/14/12	14	16	13	9	0.010	0.006	0.011	0.000
12/17/12	11	15	21	10	0.011	0.010	0.036	0.006
12/18/12	39	49	76	38	0.019	0.016	0.112	0.015
12/19/12	37	23	52	26	0.010	0.000	0.066	0.000
12/20/12	27	12	INVALID	INVALID	0.039	0.008	INVALID	INVALID
12/21/12	15	12	15	7	0.015	0.008	0.015	0.009
12/26/12	11	13	13	11	0.000	0.000	0.009	0.000
12/27/12	17	16	19	11	0.000	0.006	0.023	0.000
12/28/12	15	16	18	13	0.006	0.000	0.010	0.000
Monthly Average	23	22	28	16	0.018	0.012	0.036	0.011
Quarterly Average	27	26	30	20	0.019	0.014	0.028	0.012
					QUARTERLY LEAD NAAQS LIMIT: 1.5 $\mu\text{g}/\text{m}^3$			

Please see the particulate analysis sheets for explanations of missing or invalid data.

Note: A summary of the Big River #4 sampler data is also included, because it was part of the QA plan.

*PM<sub>10</sub> Quarterly Summary*



## Particulate Summary

### National Park Hills, Missouri

2012

Date	PM <sub>10</sub> Big River #4 (µg/m <sup>3</sup> )	PM <sub>10</sub> Ozark #1 (µg/m <sup>3</sup> )	PM <sub>10</sub> Soccer #2 (µg/m <sup>3</sup> )	PM <sub>10</sub> Water Plant #3 (µg/m <sup>3</sup> )	PM <sub>10</sub> NAAQS (µg/m <sup>3</sup> )
3-Oct	20	19	13	20	150
6-Oct	10	11	11	10	150
9-Oct	INVALID	7	8	7	150
12-Oct	17	14	15	16	150
15-Oct	15	13	12	12	150
18-Oct	29	18	18	20	150
21-Oct	18	16	16	17	150
24-Oct	16	16	17	16	150
27-Oct	8	9	13	9	150
30-Oct	13	14	11	11	150
Monthly Average	16	14	13	14	

Please see the particulate analysis sheets for explanations of missing or invalid data.

Note: A summary of the Big River #4 sampler data is also included, because it was part of the QA plan.



## Particulate Summary

National  
Park Hills, Missouri

2012

Date	PM <sub>10</sub> Big River #4 (µg/m <sup>3</sup> )	PM <sub>10</sub> Ozark #1 (µg/m <sup>3</sup> )	PM <sub>10</sub> Soccer #2 (µg/m <sup>3</sup> )	PM <sub>10</sub> Water Plant #3 (µg/m <sup>3</sup> )	PM <sub>10</sub> NAAQS (µg/m <sup>3</sup> )
2-Nov	28	18	17	18	150
5-Nov	10	10	11	11	150
8-Nov	11	14	12	10	150
11-Nov	6	12	21	7	150
14-Nov	21	11	13	8	150
17-Nov	19	20	29	20	150
20-Nov	23	25	27	22	150
26-Nov	25	22	23	18	150
29-Nov	12	12	12	9	150
Monthly Average	17	16	18	14	

Please see the particulate analysis sheets for explanations of missing or invalid data.

Note: A summary of the Big River #4 sampler data is also included, because it was part of the QA plan.



## Particulate Summary

National  
Park Hills, Missouri

2012

Date	PM <sub>10</sub> Big River #4 (µg/m <sup>3</sup> )	PM <sub>10</sub> Ozark #1 (µg/m <sup>3</sup> )	PM <sub>10</sub> Soccer #2 (µg/m <sup>3</sup> )	PM <sub>10</sub> Water Plant #3 (µg/m <sup>3</sup> )	PM <sub>10</sub> NAAQS (µg/m <sup>3</sup> )
2-Dec	15	18	20	14	150
5-Dec	13	11	14	10	150
8-Dec	13	14	14	14	150
11-Dec	10	9	9	7	150
14-Dec	17	11	10	10	150
17-Dec	18	19	18	20	150
20-Dec	10	9	10	14	150
23-Dec	11	10	10	10	150
29-Dec	15	16	17	15	150
Monthly Average	14	13	13	13	
Quarterly Average	16	14	15	13	

Please see the particulate analysis sheets for explanations of missing or invalid data.

Note: A summary of the Big River #4 sampler data is also included, because it was part of the QA plan.

*Quarterly Quality Control*



120 East Davis Street  
P.O. Box 30  
Fayette, MO 65248-0030

Phone: (660) 248-1911  
Fax: (660) 248-1921  
<http://www.inovatia.com>

## ANALYSIS REPORT

### Client Information:

Barr Engineering  
5150 W. 76th Street  
Edina, MN 55439

Project Name: Quarterly QC Samples

Quarter-Year: Q4-2012

Sample Matrix: Filter

Analysis Method: 40 CFR §58 Appendix A/40 CFR §50 Appendix G

Lab	Observed Value	Actual Value	Difference	% Difference	95% Standard Deviation	Probability Limit (+)	95% Probability Limit (-)	Analyst-Date
Number	(µg Pb/Filter)	(µg Pb/Filter)	(+/-)	(%)	Average (%)			
20A	19.423	20	-0.577	-2.885%				DS-10/19/12
20B	20.871	20	0.871	4.355%				DS-11/20/12
20C	20.921	20	0.921	4.605%	2.025%	4.254%	10.363%	DS-12/20/12
60A	57.014	60	-2.986	-4.977%				DS-10/19/12
60B	62.097	60	2.097	3.495%				DS-11/20/12
60C	61.265	60	1.265	2.108%	0.209%	4.544%	9.115%	DS-12/20/12

Submitted by:

Jennifer Vandelicht  
Quality Assurance

Digitally signed by Jennifer Vandelicht  
DN: cn=Jennifer Vandelicht, o=Inovatia  
Laboratories, LLC, ou=Quality  
Assurance, email=jvandelicht@inovatia.  
com, c=US  
Date: 2013.01.03 09:44:46 -06'00'

01/03/2013

Date

This report has been produced for the exclusive and confidential use of our clients. Reference to the analyses, the results, or the corporation in any news releases, advertising, or other public announcement is prohibited without obtaining prior written consent.